



Michigan  
*Office of the Auditor General*  
**REPORT SUMMARY**

*Performance Audit*

*Teradata Data Warehouse*

*Department of Information Technology*

Report Number:  
50-520-04

Released:  
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*The State's Teradata data warehouse (Data Warehouse) is a centralized repository of data used to support State agencies' decision-making and business processes. Much of the data stored on the Data Warehouse is considered sensitive or confidential. State agencies extract data from source systems, transform and format the data, and load the data into the Data Warehouse. State agencies use analytical tools to query data stored on the Data Warehouse to obtain accurate and timely information to support business decisions and for State and federal reporting.*

**Audit Objective:**

To assess the effectiveness of the Department of Information Technology's (DIT's) processes to ensure the confidentiality, integrity, and availability of data within the Data Warehouse.

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**Audit Conclusion:**

DIT's processes to ensure the confidentiality, integrity, and availability of data within the Data Warehouse were ineffective.

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**Material Conditions:**

DIT had not developed a server security plan for the Data Warehouse. Without a documented server security plan, DIT cannot ensure that the Data Warehouse's security requirements are appropriately addressed and consistently applied. (Finding 1)

DIT had not effectively secured the operating systems of the Data Warehouse servers. As a result, DIT cannot ensure

that data residing on the servers is protected from unauthorized modification, loss, or disclosure. (Finding 2)

DIT had not established effective security over the Data Warehouse's database. As a result, DIT could not ensure the confidentiality, integrity, or availability of data residing within the Data Warehouse. (Finding 3)

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**Reportable Conditions:**

DIT did not always reconcile data transferred between source systems and the Data Warehouse (Finding 4).

DIT's strategic plan did not include detailed strategic planning requirements for the Data Warehouse (Finding 5).

DIT had not established a Statewide privacy framework to govern the use of confidential and sensitive data maintained in information systems, such as the Data Warehouse. In addition, DIT had not established standards for data-sharing

agreements between users of State data.  
(Finding 6)

DIT had not established data management  
standards (Finding 7).

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***Noteworthy Accomplishments:***

In 2001 and 2002, the State was awarded  
National Association of State Chief  
Information Officers (NASCIO) recognition  
awards for projects developed on the Data  
Warehouse.

In 2001, the State was awarded the  
NASCIO Recognition Award for Innovative  
Use of Technology for the Department of  
Treasury's FARSTaR Project.

In 2002, the State was awarded the  
NASCIO Recognition Award for Enterprise  
Information Architecture for the  
Department of Community Health's  
development of a unique client identifier.

In 2004, DIT sponsored a Michigan Data  
Warehouse Users Group conference. The  
purpose of the conference was to bring  
together the State's data warehousing  
community, to create a resource to support  
all Data Warehouse users, and to introduce  
the Data Warehouse and demonstrate how  
it is used in the State.

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***Agency Response:***

Our audit report contains 7 findings and 8  
corresponding recommendations. DIT's  
preliminary responses indicate that it  
agreed with all of the findings and will  
comply with all of the recommendations.

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A copy of the full report can be  
obtained by calling 517.334.8050  
or by visiting our Web site at:  
<http://audgen.michigan.gov>



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